Universitat de Lleida

DEGREE CURRICULUM
DIGITAL CREATION

Coordination: BARQUE DURAN, ALBERT

Academic year 2020-21

Subject's general information

Subject name	DIGITAL CREATION			
Code	102181			
Semester	2nd Q(SEMESTER) CONTINUED EVALUATION			
Typology	Degree	Course	Character	Modality
	Bachelor's Degree in Design and Creative Tecnologies	2	COMPULSORY	Attendance-based
Course number of credits (ECTS)	6			

Type of activity, credits, and groups	Activity type	PRALAB	TEORIA
	Number of credits	3	3
	Number of groups	2	1

Coordination	BARQUE DURAN, ALBERT
Department	COMPUTER SCIENCE AND INDUSTRIAL ENGINEERING
Teaching load distribution between lectures and independent student work	40% Presential 60% Autonomous student work.
Important information on data processing	Consult this link for more information.
Language	English, Catalan and Spanish

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
BARQUE DURAN, ALBERT	albert.barque@udl.cat	6	
GANYET CIRERA, JOSEP MARIA	josepm.ganyet@udl.cat	3	

Subject's extra information

The course is organized in 5 intensive weeks.

Weeks: 2, 4, 7, 11 y 15 according to the "Calendari Acadèmic de l'Escola Politècnica Superior pel curs 2020-2021: Graus i Màsters (Campus Lleida)".

2a Setmana: 22-26 Febrer / 4a Setmana: 8-12 Març / 7a Setmana: 5-9 Abril / 11a Setmana: 3-7 Maig / 15a Setmana: 31 Maig – 4 Juny

Learning objectives

In a schematic way, the objectives of the subject are:

- To introduce the concept of digital content, its origin and evolution.

- To be able to design and create digital content.

- To understand digital content processing: analysis of use and consumption.

- To understand the distribution of digital content.

- To know how to identify the different digital contents and their scope of use.

- To know the social, cultural and ethical aspects associated with digital consumption.

- To relate digital content and its use with platforms and social networks.

- To create, while defining, the behavior and purpose appropriate to digital content based on its final application and the presentation platform.

- To be able to analyze the impact of digital content.

- To know the different styles and trends of digital art as well as the different techniques to elaborate or finish graphic representations through the application of digital techniques.

- To know the most important characteristics of the different manifestations, techniques and artistic languages developed by different civilizations from Antiquity to the present.

- To know the main trends of digital technologies in the artistic field.

- To know the artistic language and use the terminology of the discipline.

- To acquire aesthetic ability and to know how to express one's own feelings and ideas in front of artistic

creations, respecting the diversity of perceptions of the work of art and overcoming stereotypes and prejudices.

- To know how to recognize and assess the possibilities of virtual spaces and digital art.

- To understand the main characteristics of digital cultures.

- To understand the relationship between art history and culture in the technological-digital context.

Competences

Basic competences

CB1. To demonstrate knowledge in their area of study that starts from the base of general secondary education, and is usually found at a level that, although supported by advanced textbooks, also includes some aspects that imply knowledge coming from the forefront of his field of study.

Cross competences

CT3. To acquire training in the use of new technologies and information and communication technologies.   CT5. To acquire essential notions of scientific thought and critical thinking.

General competences

CG1. The ability to create and develop answers to communication problems for different digital contents CG3. The ability to respond to contexts of digital environments recognizing physical, cognitive, cultural and social factors that frame design decisions

CG6. To understand and know how to interact and meet the needs of new customers in digital contexts

CG7. The capacity for analysis and development of digital technologies for the visualization of information

CG9. To know the main keys and trends in digital environments.

Specific competences

CE8. The capacity for the creation and exploitation of virtual worlds, and for the creation, management and distribution of multimedia content

CE9. To know the methodologies, programs, techniques, norms and standards, as well as being able to use the acquired knowledge base with specific elements of web development.

CE11. To know how to visualize and communicate information by mastering the techniques of graphic expression in 2D and 3D, knowing how to present the results based on aesthetic canons

CE13. To acquire aesthetic and artistic sensitivity to make decisions during the creative process, demonstrating skill in handling the techniques and procedures specific to digital art.

Subject contents

BLOCK 1: Being analog in a digital world

Evolution of the eye, camera obscura, photosensor: a short history of audiovisual technology

Babbage, Lovelace, Turing

Digitization, digitalization and digital transformation: confuse them at your peril

The laws of digital information

Being digital, impact on individuals and societies

Digital vs analog: The brain-hand loop

Calligraphy toolkit

BLOCK 2: Big data, small data, right data

Data, information, knowledge

Truth, context, wikipedia

The problem with big data

How to represent big data

Data physicalization

From big data to small data and back

BLOCK 3: Artificial intelligence, natural stupidity

What is AI

What is not AI

Why all the AI buzz? It's your fault.

GOFAI vs ML

ANI vs AGI

(Deep) Neural networks

What is a robot?

The Barcelona declaration for the proper development and usage of artificial intelligence in Europe

BLOCK 4: News, fake news and deep fakes

Personal media, mass media and neither of them

The global conversation

The medium is the massage

What is reality? How do we know that something exists

John Archibald Wheeler's "It from bit"

Are we living in a simulation?

BLOCK 5: Techonomics, ethics and astronomy

Where is everybody: the Fermi paradox

To program is to make politics

The Entrepreneurial State

Biases, ethics and accountability

Ethics for machines

The Trivium and the Quatrivium: the Seven Liberal Arts

External Visits and "Guest Lectures".

Methodology

- The course is organized in 5 blocks of different themes. Each intensive week corresponds to 1 different block.

- In the theoretical sessions, the compulsory readings of theoretical nature corresponding to the 5 blocks will be presented, discussed and defended. These readings have the following objectives: (1) comprehension and learning, (2) reflection, (3) generation of opinions and critical discourses.

- In the practical sessions the projects of applied character corresponding to the 5 blocks will be covered. These projects have the following objectives: (1) understanding and learning, (2) planning and management, (4) execution, (5) presentation / delivery.

- The autonomous work of the student consists in the preparation of the readings of the theoretical sessions (with their corresponding exercises) and in the execution of the applied projects.

Development plan

The materials of the different weeks / blocks will be correspondingly organized and posted on the Virtual Campus to be able to be downloaded.

Week 2 (22-26 Febrer)

BLOCK 1: Being analog in a digital world

Evolution of the eye, camera obscura, photosensor: a short history of audiovisual technology

Babbage, Lovelace, Turing

Digitization, digitalization and digital transformation: confuse them at your peril

The laws of digital information

Being digital, impact on individuals and societies

Digital vs analog: The brain-hand loop

Calligraphy toolkit

Week 4 (8-12 Març)

BLOCK 2: Big data, small data, right data

Data, information, knowledge

Truth, context, wikipedia

The problem with big data

How to represent big data

Data physicalization

From big data to small data and back

Week 7 (5-9 Abril)

BLOCK 3: Artificial intelligence, natural stupidity

What is AI

What is not AI

Why all the AI buzz? It's your fault.

GOFAI vs ML

ANI vs AGI

(Deep) Neural networks

What is a robot?

The Barcelona declaration for the proper development and usage of artificial intelligence in Europe

Week 11 (3-7 Maig)

BLOCK 4: News, fake news and deep fakes

Personal media, mass media and neither of them

The global conversation

The medium is the massage

What is reality? How do we know that something exists

John Archibald Wheeler's "It from bit"

Are we living in a simulation?

Week 15 (31 Maig – 4 Juny)

BLOCK 5: Techonomics, ethics and astronomy

Where is everybody: the Fermi paradox

To program is to make politics

The Entrepreneurial State

Biases, ethics and accountability

Ethics for machines

The Trivium and the Quatrivium: the Seven Liberal Arts

External Visits and "Guest Lectures".

Evaluation

Partial Exam 1: 20%

Partial Exam 2: 20%

Practice Block 1: 10%

Practice Block 2: 10%

Practice Block 3: 10%

Practice Block 4: 10%

Sessions with Professor Josep M. Ganyet: 20%

* To pass the subject the median of the exams must be > = 5, taking into account that none of the exams can have less than a 4.

Bibliography

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